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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,747	11/14/2005	Martin Fischer	07781.0216-00	7868
22852 7590 01/07/2008 FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			EXAMINER LIN, SHEW FEN	
			ART UNIT 2166	PAPER NUMBER
			MAIL DATE 01/07/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/526,747	FISCHER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Shew-Fen Lin	2166	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 October 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 and 15-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 15-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

- a. This action is taken to response to amendments and remarks filed on 10/23/07.
- b. Claims 1-12 and 15-31 are pending in this Office Action. Claims 1, 11-12, and 23 are independent claims.
- c. In view of the amendment to specification, the Examiner hereby withdraws the pending rejection that was given in the previous Office Action.
- d. In view of the amendment to claim 8, the Examiner hereby withdraws the pending 112 rejection that was given in the previous Office Action

### ***Terminal Disclaimer***

The terminal disclaimer filed on 10/23/2007 disclaiming the terminal portion of any patent granted on this application, which would extend beyond the expiration date of US Patent No. 7,222,142 has been reviewed and is accepted. The terminal disclaimer has been recorded.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-12 and 15-31 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-14, 16, and 18-40 of copending Application No. **10/526,504**. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are substantially similar in scope and they use the same limitations, i.e., first ad second lock objects in application 10/526,504 are obviously used in lieu of transactional type lock object and permanent type lock object.

Claims 1-12 and 15-31 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-13, 15, and 17-38 of copending Application No. **10/526,749**. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are substantially similar in scope and they use the same limitations, i.e., first ad second lock objects in application 10/526,749 are obviously used in lieu of transactional type lock object and permanent type lock object.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 11-12 and 15-31 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As per claims 11 and 23-31, “a computer system” is being cited. However, it appears that one of ordinary skill in the art could reasonably interpret the system as software, per se. As defined in the specification, it is clear that each of the means for is a software instruction to be executed, thus constitutes functional descriptive material. When functional descriptive material is recorded on some computer-readable medium, e.g. memory, and executable, e.g. by a processor, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. The claim lacks the components to enable the functions of the system to be realized and thus does not fall within any of the four statutory classes of 35 U.S.C. § 101.

In reference to claims 12-22, the claims fail to place the invention squarely within one statutory class of invention. In page 18, line 18 of the instant specification, applicant has provided evidence that applicant intends the “medium” to include signals by the use of the word ‘propagation medium’ which is not further defined in the specification. As such, the claim is drawn to a form of energy. Energy is not one of the four categories of invention and therefore

this claim is not statutory. Energy is not a series of steps or acts and thus is not a process.

Energy is not a physical article or object and as such is not a machine or manufacture. Energy is not a combination of substances and therefore not a composition of matter.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5-6, 18-19, and 27-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 recites the limitation "all selected data objects". There is insufficient antecedent basis for the limitation in the claim, in the preceding claim; only "a data object" is selected, as "selecting a data object... ". Similar problem exists in claims 18 and 27.

Claim 6 recites the limitation, "checking whether the ID for one of the data object has been stored in at least one of the transactional type lock object and the permanent type lock object, and if, the ID has been stored, skipping storing the data object at the second storage location". Since the ID for the data object will be stored in one of the transactional type lock object and the permanent type lock object, do this means that the data object will never be stored in the second storage location? Similar problem exists in claims 19 and 28. Clarification is needed.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-12, 16-23, 25-31 are rejected under 35 U.S.C. 103(a) being unpatentable over Larsson et al. (US 5,548,750) in view of Nakano (US PG-Pub 2003/0004975).

**As per claim 1**, Larsson et al. disclose a method for moving data objects in a computer system from a first storage location to a second storage location, the method comprising:

- selecting a data object from the first storage location *[Fig. 1, elements A' and C']*;
- assigning an identifier (ID) to the data objects *[The objects are divided into classes after their area of use, and are identified by means of object identities; col 1, lines 37-39]*;
- storing the ID in a transactional type lock object *[objects in question have, according to FIG. 6, been backup marked in the LID table of the local dam base; col 6, lines 45-47]*;
- determining whether the ID is stored successfully in the transactional type lock object, and upon a successful storage, storing the ID in a permanent type lock object *[Copying objects to the backup area will, however, not start until the local data base handler has made all changes from transactions to be included in the backup visible in the data base; col 6, lines 14-17]*;

determining whether the ID is stored successfully in the permanent type lock object, and upon a successful storage, deleting the ID from the transactional type lock object *[Fig. 14, col 2, row 2, dbrecord is removed from the LID table];*

storing the data object, at the second storage location and assigning the second storage location to the ID in the permanent type lock object *[If it is equal to "include" the object will be copied to the backup area, if it is equal to "exclude" the object will not be copied but the value of the variable is set to "Include" a preparation for the next backup; col 8, lines 7-11];*

deleting the data object, from the first storage location *[Fig. 2, element Throw old object].*

Larsson et al. disclose moving data objects in a computer system from a first storage location to a second storage location, described in the previous paragraph. However, Larsson et al. do not explicitly teach deleting the ID from the permanent type lock.

Nakano teaches

deleting the ID from the permanent type lock object after the respective data object assigned to that ID has been deleted from the first storage location *[the DBMS acceptance section 600 accepts a notification indicative of the data insert completion (step S1107) and issues a delete request to delete the insert original data (step S1108); para 0104, lines 4-7].*

Larsson et al. and Nakano are analogous are because they are in the same general field transferring files between two storage locations.

At the time when the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the method of Larsson et al. to adapt the deletion of the original data object after its copied to a second storage area.



The motivation for doing so would have been to provide a database system, database management method and program, which, even during data rebalance execution of table data, can perform acceptance and execution of a database processing request such search, update, delete or insert concurrently with the rebalance execution and with improved operability and performance of a database, suggested by Nakano [para 0009, lines 2-7].

**As per claim 3** Larsson et al. disclose the data object is stored in a file and wherein an assignment of the ID to the file or a name of the file, in which the data object assigned to the ID is to be stored, is stored in the permanent type lock object *[Fig. 11, element LID table for Backup handler]*.

**As per claim 4**, Larsson et al. disclose the ID is stored in the transactional type lock object after assigning at the ID to the data object *[Fig. 11, LID table for Data Base handler]*.

**As per claim 5**, Larsson et al. disclose storing the ID in the permanent type lock object comprises storing IDs of all selected data objects in the permanent type lock object before storing any of the selected data objects at the second storage location *[Fig. 8, element 140]*.

**As per claim 6**, Larsson et al. disclose checking whether the ID for one of the data object has been stored in at least one of the transactional type lock object and the permanent type lock object, and if, the ID has been stored, skipping storing the data object at the second storage

location *[Fig. 11, Pointers from LID table in Data Base Handler to LID table in Backup handler for Obj. B and Obj. C].*

As per claim 7, Larsson et al. disclose checking whether the data object is contained in the second storage location and if the data object is contained, skipping storing the data object at the second storage location *[the data base points to the objects B and D in the backup area 4, indicated by arrows 14 and 16; col 4, lines 45-47].*

As per claim 8, Larsson et al. disclose wherein the checking comprises querying at least one of the transactional type lock object and the permanent type lock object *[a "BackupSynch" variable which can take the values "Include" or "Exclude" and the value of which is used by the local data base handler and by the local backup handlers to decide whether objects shall be included in a backup or not; col 3, lines 1-5].*

As per claim 9, Larsson et al. disclose determining whether the ID was successfully stored in the transactional type lock object, and upon an unsuccessful storage, checking whether the data object assigned to the respective ID has been stored in the second storage location and if the data object has not been stored, skipping deleting the data object from the first storage location and skipping deleting the ID from the permanent type lock object *[Fig. 3, Backup failed and then led to the stop of operation since not all database handlers had acknowledged to create backups].*

**As per claim 10**, Larsson et al. disclose for use in an enterprise resource planning software *[backing up in a distributed real time data base on primary memory in operation, all data in the data base are structured belonging to one of several logic data bases; abstract, lines 1-3]*.

**As per claim 11**, is directed to a system claim carrying instructions for performing the method of claim 1 and is rejected along the same rationale.

**As per claims 12, 16-22**, are directed to a computer readable medium carrying instructions for performing the methods of claims 1, 3-9 respectively and therefore rejected along the same rationale.

**As per claims 23, 25-31**, are directed to system claims carrying instructions for performing the methods of claims 1, 3-9 respectively and therefore rejected along the same rationale.

Claims 2, 15, 24 are rejected under 35 U.S.C. 103(a) being unpatentable over Larsson et al. (US 5,548,750) and Nakano (US PG-Pub 2003/0004975) and further in view of Teng et al. (US 6,944,615).

**As per claim 2**, Larsson et al. and Nakano disclose the claimed invention detailed in the previous paragraphs. However, Larsson et al. do not explicitly teach using database tables data objects.

Teng et al. teach each data object comprises one or more fields of one or more tables, and wherein the ID comprises one or more key fields of the one or more tables *[To provide organization of the database, a unique key index 42 is maintained, with separate indexes for*

*each table. Thus, the unique key index 42 includes an inventory table index 44, a sales table index 46, and a human resources table index 48; col 2, lines 6-10].*

Larsson et al. and Teng et al. are analogous are because they are in the same general field of managing locks on transactions performed in a database environment.

At the time when the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the method of Larsson et al. to specify tables and utilize their attributes when applying information back up in a distributed database.

The motivation for doing so would have been that it was known in the art that tables are a form of database objects that represents a collection of interrelated data. Tables are accessible for transactions, such reading/writing, performed with regard to information stored in the database (column 1 line 61 to column 2 line 23, Teng).

**As to claim 15**, is directed to a computer readable medium carrying instructions for performing the method of claim 2 and therefore rejected along the same rationale.

**As to claim 24**, is directed to a computer system claim carrying instructions for performing the method of claim 2 and therefore rejected along the same rationale.

### ***Response to Amendment and Remarks***

Applicant's arguments with respect to claims 1, 3-12, 16-23, and 25-31 have been considered, but they are not deemed to be persuasive.

Applicants argue Larsson does not render obvious "permanent type lock object" or "ID in a permanent type lock object" as recited in claim 1. The examiner respectfully disagrees.

Applicant is reminded that the Examiner is entitled to give claim limitations their broadest reasonable interpretation in light of the specification. During patent examination, the pending claims must be 'given the broadest reasonable interpretation consistent with the specification.' Applicant always has the opportunity to amend the claims during prosecution and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 162 USPQ 541,550-51 (CCPA 1969). In this case, Larsson clearly teach "permanent type lock object" and "ID in a permanent type lock object" as LID table in backup area (see Fig. 11), where LID table contains the entry (ID) for the object in the LID table (column 7, lines 47-48).

Applicants argue that Nakano discloses "a notification indicative of the data insert completion" and a "request to delete the insert original data" does not render obvious "deleting the ID from the permanent type lock object" as recited in claim 1. The Examiner respectfully disagrees.

In response to applicants' argument, "Test of obviousness is not whether features of secondary reference may be bodily incorporated into primary reference's structure, nor whether claimed invention is expressly suggested in any one or all of references; rather, test is what combined teachings of references would have suggested to those of ordinary skill in art." In re Keller, Terry, and Davies, 208 USPQ 871 (CCPA 1981). Larsson discloses for the removed object such as object D, the record in the LID table is removed (column 7, line 27, lines 56-58) i.e. implicitly teaches "deleting the ID from the permanent type lock object". Furthermore, Nakano explicitly teaches the limitation as rebalance operation of copying the data to the additional storage and deleting the original data (abstract), and it is known once the original data

is deleted so does the entry (ID) of the data is deleted. Therefore, the combination of Larsson and Nakano implicitly as well as explicitly teaches the limitation "deleting the ID from the permanent type lock object"

Applicants argue that a prima facie case of obviousness has not been established for the rejection of claims 2, 15, and 24.

Examiner is not persuaded. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been obvious to a person of ordinary skill in the art to modify the method of Larsson et al. to specify tables and utilize their attributes when applying information back up in a distributed database. The motivation for doing so would have been that it was known in the art that tables are a form of database objects that represents a collection of interrelated data. Tables are accessible for transactions, such reading/writing, performed with regard to information stored in the database (column 1 line 61 to column 2 line 23, Teng). Examiner notes: a prima facie case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art. Once such a case is established, it is incumbent upon appellant to go forward with objective evidence of unobviousness. *In re Fielder*, 471 F.2d 640, 176 USPQ 300 (CCPA 1973).

Thus, for the above reasons, it is believed that the rejection under 35 U.S.C. 103 provides substantial evidence to support the rationale statement in the above rejection, and the rejection under 35 U.S.C. 103 should be sustained.

#### ***Related Prior Arts***

The following list of prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Chan; Wilson Wai Shun, US 6412034 B1, "Transaction-based locking approach".
- Bamford; Roger J. et al., US 6353836 B1, "Method and apparatus for transferring data from the cache of one node to the cache of another node".
- Lakhamraju; Mohana Krishna et al., US 6343296 B1, "On-line reorganization in object-oriented databases".

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shew-Fen Lin whose telephone number is 571-272-2672. The examiner can normally be reached on 8:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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December 27, 2007

Shew-Fen Lin  
Patent Examiner  
Art Unit 2166

  
**HOSAIN ALAM**  
**SENIOR PATENT EXAMINER**